A comprehensive national SDG 4 monitoring system - strengthening EMIS

Definition of Minimum Proficiency Level and options for reporting SDG 4.1
Target 4.1 aims to “ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes” by 2030.

Global indicator 4.1.1 refers to the “proportion of children and young people (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex.”
High-quality learning data is needed

Reporting on SDG 4.1.1 requires setting global common definitions on national and cross-national assessments to allow countries:

- report on proportion of learners meeting a minimum level;
- identify the best way to support students achieving “meaningful learning outcomes”;
- track outcomes over time to identify progress and the lack of it;
- share and learn from each other in terms of education and social policies and teaching and learning strategies.
The challenges of comparison when children in different countries sit for a variety of different assessments

Comparing reading scores

Country A: child scores 40 out of 80 in regional test X
Country B: child scores 40 out of 50 in regional test Y
Country C: child scores 40 out of 65 in global test Z
Country D: child scores 40 out of 70 in national test W

Are all children equally proficient in reading?

Does any/all children meet the MPL in terms of the reading they should be able to do for their schooling level?
Methodological challenges:

Building the foundational blocks 2016-2019

- **Solving definitional issues**
  - What contents?
  - What proficiency levels?
  - What is the minimum proficiency level (MPL)

- **Harmonizing data sources**
  - Different frameworks
  - Different tools (items/ scales for reporting)
  - Different proficiency levels descriptors
  - Different student population, different languages
The indicator needs the following inputs:

- **Domain**: reading and mathematics. Reading and mathematics are measured at the national level in numerous ways;
- **Minimum proficiency level (MPL)**: is the benchmark of basic knowledge in a domain (mathematics, reading, etc.) at a given age/grade;
- **Linking to the MPL**: methodologies to harmonize various data sources to a common definition of the MPL;
- **Sample**: the sample needs to be representative of the relevant population
<table>
<thead>
<tr>
<th>Education level/ Grade</th>
<th>Mathematics</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 2/3</td>
<td>Students demonstrate skills in number sense and computation, reading simple data displays, shape recognition and spatial orientation.</td>
<td>Students read aloud and comprehend many single written words, particularly familiar ones, and extract explicit information from sentences. They make simple inferences when longer texts are read aloud to them.</td>
</tr>
<tr>
<td>End of Primary</td>
<td>Students demonstrate skills in number sense, computation, real world problems, basic measurement, 2D shape recognition, and reading and interpreting simple data displays</td>
<td>Students independently and fluently read simple, short narrative and expository texts. They locate explicitly-stated information, interpret and give some explanations about the key ideas in these texts. They provide simple, personal opinions or judgements about the information, events and characters in a text.</td>
</tr>
<tr>
<td>End of Lower secondary</td>
<td>Students demonstrate skills in computation, solving problems in measurement and geometry, interpreting, and constructing a variety of data displays, and making use of algebraic representations.</td>
<td>Students locate and connect multiple pieces of related information across sections of texts to understand key ideas. They make straightforward inferences when there is some competing information. They reflect and draw conclusions based on evidence, in a variety of text types.</td>
</tr>
</tbody>
</table>
The Minimum Proficiency Level (MPL)

**MPL** = **benchmark of basic knowledge in a domain** (mathematics, reading)

### Reading

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Descriptor</th>
<th>Assessment level aligned</th>
</tr>
</thead>
</table>
| End of primary (Grades 4 & 6) | • Read and understand a text  
• Interpret & explain ideas in text | • PASEC 2014 – Level 4  
• TERCE 2014 – Level 3  
• PIRLS 2011 & 2016 - Low |

### Mathematics

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Descriptor</th>
<th>Assessment level aligned</th>
</tr>
</thead>
</table>
| End of primary (Grades 4 - 6) | • Number sense and computation  
• Basic measurement  
• Number patterns | • PASEC 2014/19 – Level 3  
• ERCE 2014/19 – Level 3  
• TIMSS 2015/ 2019 – Intermediate |

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### Assessments currently used by UIS for reporting by level of education

<table>
<thead>
<tr>
<th>Assessments</th>
<th>Grade 2/3</th>
<th>End of primary</th>
<th>End of lower secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERCE/UNESCO</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>PASEC</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>PILNA</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>PIRLS</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>PISA/ PISA-D</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>SACMEQ IV</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>SEA-PLM</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>TIMSS 4th grade - Math</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>TIMSS 8th grade - Math</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>National assessment</td>
<td>Subject to statistical linking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modules that measure only one Proficiency Level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMPL-b (MILO testlet)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
Reporting indicator 4.1.1
UIS workflow

Details of protocol of reporting is available in https://gaml.uis.unesco.org/4-1-1/
Global Proficiency Framework (GPF)
what contents and what proficiency

- Proposes **performance standards in reading and mathematics for grades 1-9**
  - What children should be able to do for each domain in each grade

- Contains **proficiency levels** and their **descriptors**
  - Grades 1 through 9
  - Reading and mathematics

- Developed based on **developmental progressions and national assessment frameworks**:
  - Translated to **Spanish**; specific parts in Khemer, Nepali and Hindi and other 20 regional language of India.
  - Upcoming French, Arabic

ACER and UIS, “Learning Progression Explorer”
https://www.acer.org/gb/gem/learning-progression-explorer
Policy linking has been piloted for allowing linking of national assessments.

Teachers-in-country give pedagogical interpretation to learning assessment results, by linking proficiency levels to the MPL.

Implemented to align National Assessments
(4.1.1 all levels)

UIS
• India, grades 3 and 5 (2019); grade 8 (2021)
• Bangladesh grades 3 and 5 (2019); Cambodia (grade 6);
  Lesotho (grade 6), Zambia (grade 6) and Nepal (grade 5)

USAID:
• Nigeria (2020), Morocco, Kenya and Djibouti;
  forthcoming Senegal.

WBG:
• Ghana, Gambia

USAID/FCDO/UIS:
• ICAN/PAL Network
Students-in-country sit for two assessments programs and serve as the “link” which allows the correspondence of results from **between the two assessment**

<table>
<thead>
<tr>
<th>IEA/UIS Rosetta Stone Concordance Table (End of Primary - 4.1.1 b)</th>
<th>Monitoring the impact on Learning Outcomes (MILO) Module aligned to MPL (end of Primary -4.1.1 b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEA’s PIRLS and TIMSS is linked to PASEC (<strong>Burundi, Senegal and Guinea</strong>) and ERCE (<strong>Chile, Guatemala, Colombia</strong>)</td>
<td>A testlet (AMPL-B) aligned to the Global MPL administered in 6 countries reporting for PASEC (<strong>Burkina Faso, Senegal, Burundi, Ivory Coast</strong>) and NASMLA (<strong>Kenya</strong>) and NPA (<strong>Zambia</strong>)</td>
</tr>
</tbody>
</table>
Thank You!